

ABSTRACT

The present invention provides a method and apparatus that plates/deposits a conductive material on a semiconductor substrate and then polishes the same substrate. This is achieved by providing multiple chambers in a single apparatus, where one chamber can be used for plating/depositing the conductive material and another chamber can be used for polishing the semiconductor substrate. The plating/depositing process can be performed using brush plating or electro chemical mechanical deposition and the polishing process can be performed using electropolishing or chemical mechanical polishing. The present invention further provides a method and apparatus for intermittently applying the conductive material to the semiconductor substrate and also intermittently polishing the substrate when such conductive material is not being applied to the substrate. Furthermore, the present invention provides a method and apparatus that plates/deposits and/or polishes a conductive material and improves the electrolyte mass transfer properties on a substrate using a novel anode assembly.